

1.0 INTRODUCTION

1.1 BACKGROUND

The U.S. Highway 93 (U.S. 93) Hoover Dam Bypass Project calls for the U.S. Department of Energy (DOE) Western Area Power Administration (Western) to remove its Arizona and Nevada (A&N) Switchyard. As a result of this action, Western must reconfigure its existing electrical transmission system in the Hoover Dam area. Western proposes to double-circuit a portion of the Hoover-Mead #5 and #7 230-kV Transmission Lines with the Henderson-Mead #1 Transmission Line (see Figure 1-1). Double-circuiting is the placement of two separate electrical circuits, typically in the form of three separate conductors or bundles of conductors, on the same set of transmission line structures. The old Henderson-Hoover 230-kV Transmission Line would become the new Henderson-Mead #1 and would extend approximately eight miles to connect with the Mead Substation. Western owns, operates, and maintains the Hoover-Mead #5 and #7, and Henderson-Hoover electrical power transmission lines. Additionally, approximately 0.25 miles of new right-of-way (ROW) would be needed for the Henderson-Mead #1 when it transfers from double-circuiting with the Hoover-Mead #7 to the Hoover-Mead #5 at the Boulder City Tap. The proposed project would also involve a new transmission line ROW and structures where the Henderson-Mead #1 will split from the Hoover-Mead #5 and enter the northeast corner of the Mead Substation. Lastly, Western has proposed adding fiber optic overhead ground wire from the Hoover Power Plant to the Mead Substation on to the Henderson-Mead #1, Hoover-Mead #5 and #7 Transmission Lines.

The proposed project includes replacing existing transmission line tower structures, installing new structures, and adding new electrical conductors and fiber optic cables. As a consequence of these activities, ground disturbance may result from grading areas for structure placement, constructing new roads, improving existing roads for vehicle and equipment access, and from installing structures, conductors, and fiber optic cables. Project construction activities would be conducted within the existing 200-foot transmission line ROW and 50-foot access road ROW, although new spur access roads could occur outside of existing ROWs.

As lead Federal agency for this action under National Environmental Policy Act (NEPA), Western must ensure that adverse environmental effects on Federal and non-Federal lands and resources are avoided or minimized. This Environmental Assessment (EA) is intended to be a concise public document that assesses the probable and known impacts to the environment from Western's Proposed Action and alternatives, and reaches a conclusion about the significance of the impacts. This EA was prepared in

compliance with NEPA regulations published by the Council on Environmental Quality (40 CFR 1500-1508) and implementing procedures of the Department of Energy (10 CFR 1021).

1.2 PROJECT HISTORY

The Federal Highway Administration (FHWA) prepared an Environmental Impact Statement (EIS) for construction of a new segment of U.S. 93 to improve congestion and hazardous vehicle/pedestrian conflicts where the highway crosses the Colorado River over Hoover Dam. As a cooperating agency for the EIS, Western proposed modifications to its transmission system and facilities to accommodate the construction for the new highway and bridge spanning the Colorado River. In October 2002, Western adopted the Record of Decision and announced its decision to modify its transmission system to accommodate the new highway segment (Federal Register 2002 Volume 67, No. 190 p. 61619).

Western decided to modify its current transmission system in two phases. Modifications for the first phase (Phase I) included: 1) rebuilding about 2.6 miles of the Hoover-Mead #6 (single-circuit) and #7 (double-circuit) 230-kV Transmission Lines (removing and replacing electrical equipment, conductors, overhead ground wires, replacing lattice steel structures with steel poles); 2) removing conductors and overhead ground wires and insulator assemblies for approximately 1.2 miles of the existing Arizona-Nevada Circuits 11 and 12 230-kV Transmission Lines between Hoover Dam and the A&N Switchyard; 3) constructing approximately 0.3 miles of single-circuit 230-kV transmission line connecting the Southern California Edison Circuit #10 to the A&N Switchyard and to the Hoover Dam Power Plant; and 4) modifying transmission line connections at the Hoover Dam Power Plant yard and A&N Switchyard to accommodate the new configurations. These modifications under Phase I were completed in May 2003. The second phase (Phase II) is described on the previous page and is the Proposed Action for this EA. Phase II modifications are expected to be completed by June 2004.

1.3 PURPOSE AND NEED

The U.S. 93 Hoover Dam Bypass Project's proposed alignment interferes with Western's existing electric transmission system. Because Western needs to maintain its transmission system to provide reliable electric and transmission service to its customers in Arizona, California, and Nevada, Western proposes to complete the second of two phases (Phase II) to bypass the A&N Switchyard by extending the old Henderson-Hoover 230-kV Transmission Line about eight miles to connect to the Mead Substation and renaming the line the Henderson-Mead # 1 (Hoover-Mead Transmission Line Upgrade). This transmission line upgrade was part of the transmission reconfiguration options evaluated in the U.S. 93 Hoover Bypass Project Final EIS, but since the final configuration was dependent upon the FHWA's decision, the upgrade was not fully evaluated in the EIS.

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1.4 APPLICABLE REGULATORY REQUIREMENTS AND REQUIRED COORDINATION

Table 1-1 summarizes which applicable laws and regulations Western must comply with to complete the proposed project.

TABLE 1-1 SUMMARY OF APPLICABLE LAWS AND REGULATIONS	
Law/Regulation	Applies to
American Indian Religious Freedom Act (AIRFA)	Archaeological resources and tribal consultation
Archaeological Resources Protection Act (ARPA)	Archaeological resources and tribal consultation
Clean Water Act (CWA)	Surface water quality
Endangered Species Act (ESA)	Threatened and endangered species
Executive Order 11593	Protection and enhancement of the cultural environment
Executive Order 11988	Floodplains and wetlands
Executive Order 12898	Environmental justice
Executive Order 13122	Noxious weeds
Executive Order 13175	Consultation and coordination with Indian tribal government
Executive Order 13212	Energy policy
National Environmental Protection Act (NEPA)	Federal undertakings/DOE NEPA regulations
National Historic Preservation Act (NHPA)	Historic properties and traditional cultural properties

1.5 PERMITS, LICENSES, AND ENTITLEMENTS

TABLE 1-2 SUMMARY OF PERMITS, LICENSES, AND ENTITLEMENTS	
Permitting Agency	Permit/Authorization
FEDERAL	
U.S. Army Corps of Engineers	Section 404, CWA
STATE	
Nevada Division of Environmental Protection, Bureau of Water Pollution Control	NPDES permit for construction activities
Nevada State Historic Preservation Office	Section 106, NHPA, as amended; amended consultation
LOCAL	
Clark County	County construction permits Department of Air Quality Management Dust Control Permit
Boulder City	City construction permits